MDA Horticulture Fund 2005 Final Report

Proposal Title: Identifying the Scope of Invasive Plants within Michigan

Project MDAHF# 91630

Principle Investigator: Robert E. Schutzki

Reporting Period: 2005-2006

Accomplishments during Reporting Period:

Investigation of the current status of invasive plants in Michigan crosses several boundaries and includes natural areas, production systems (agricultural, horticultural, forest), and urban/suburban communities. We conducted an internet search and contacted several public and non profit agencies to assess their awareness, knowledge, and direct experience with the invasive plant issue within Michigan.

Objective #1: To survey public land managers on the presence and extent of invasive plants under their jurisdiction.

The following agencies or organizations were identified as either having invasive species lists or mentioning invasive species with respect to Michigan. Several out of state agencies and organizations are listed with internal links to plants observed or identified as being in Michigan. Many of these lists are based on regional lists, anecdotal information, and observation. The extent of distribution within the state is not identified. Two lists were constructed; those having established invasive lists and those simply mentioning invasive plants. These agencies and organizations will be the target for continued work on identifying specific species. See Agency lists ant the end of this report.

Objective #2: To acquire invasive plants lists in Michigan, identify the sources and establish the methods by which these lists were generated, and develop a master list of the plants identified.

It is important to document information on plant invasiveness through sound science and economic criteria. 113 weed lists are known at the state or higher level. Many have been produced by governmental agencies. Only 12% of these lists require documentation for placing a species on the list. Many lists have been formed by borrowing from other lists and not on sound science or economic data. Much of the information needed to support or reject a plant's invasiveness is not documented and the result of anecdotal information. This situation exist in Michigan, there are a number of governmental agencies, public institutions, and private organizations with invasive plant lists. The MDA Composite Plant List (Table 1) have been collected from agencies and organization outlined in this report.

Objective #3: Identify the plants that are currently produced or products of our Michigan Plant and Natural Resource Industries.

Plants of economic importance will be extracted from the MDA Composite Plant List and process these plants through the Michigan Plant Invasiveness Assessment System

Other funds or contributions related to the project:

This project is part of a broader effort to address the lack of documentation and coordination of information on invasive plants in Michigan. This proposal focuses on information concerning economically important plants. The information gained through this project will be used as a foundation for subsequent project proposals directed at assessment of plant invasiveness through the Michigan Plant Invasiveness Assessment System. Subsequent proposals will be submitted to Project GREEN and the Michigan Nursery and Landscape Association. MDA Horticulture Fund has funded a 2006/2007 proposal to assess the invasiveness of plants through the Michigan Plant Invasiveness Assessment System. Species under investigation will include those identified from the agencies and organizations outlined in this project.

Publications/outreach activities related to the project:

The information generated through this project will aid in developing an outreach strategy that both preserves environmental health and the economic growth of the industries relying on the production and sale of plant and plant products. The information received to date was incorporated into presentations given to the West Michigan Nursery and Landscape Association, at the Great Lakes Trade Exposition sponsored by the Michigan Nursery and Landscape Association, and at a meeting of nursery and landscape professionals at the MidAm Trade Show, Chicago, IL between January and March of 2006. Presentations are also being given at the Eastern Region Annual meeting of the International Plant Propagators Society (October, 2006), and the Great Lakes Trade Exposition (January, 2007).

The information will also be shared with the Michigan Invasive Plant Council and is the basis for the 2006/2007 MDA Horticulture Fund project to assess plants through the Michigan Plant Invasiveness Assessment System. Information as it develops from the assessment will be shared with the MI DNR invasive plant committee, MI Department of Agriculture, MI Department of Environmental Quality, and the MI Nursery and Landscape Association Invasive Plant Task Force.

AGENCIES WITH INVASIVE SPECIES LISTS

Oakland Land Conservancy P.O. Box 80902 Rochester, MI 48308 Ph: 248-601-2816

Fax: 248-601-4582

www.oaklandlandconservancy.org

Great Lakes Information Network (GLIN) (at) Great Lakes Commission Eisenhower Corporate Park 2805 S. Industrial Hwy., Suite 100 Ann Arbor, MI 48104-6791

Ph: 734-971-9135 Fax: 734-971-9150 www.great-lakes.net

Great Lakes Commission
Address and phone numbers same as above
www.glc.org

Natural Area Preservation Division City of Ann Arbor Department of Parks and Recreation 1831 Traver Road Ann Arbor, MI 48105 Ph: 734-996-3266 Fax: 734-997-1072

http://www.ci.ann-arbor.mi.us/Parks/NAP/nap.html

Great Lakes Environmental Directory

A project of the Great Lakes Aquatic Habitat Network and the Environmental Association for Great Lakes Education 394 Lake Ave. S., Suite 222 Duluth, MN 55802 218-726-1828 Contact@GreatLakesDirectory.org

Aquatic Research Laboratory Department/Office Name Lake Superior State University 650 W. Easterday Avenue Sault Ste. Marie, MI 49783 906-635-2153

Pierce Cedar Creek Institute 701 West Cloverdale Rd. Hastings, MI 49058 http://www.cedarcreekinstitute.org

Ph: 269-721-4190 Fax: 269-721-4474

International Association for Great Lakes Research 2205 Commonwealth Blvd. Ann Arbor, MI 48105

Ph: 734-665-5303 Fax: 734-741-2055 president@iaglr.org The Watershed Center Grand Traverse Bay 232 E. Front Street Traverse City, MI 49684 Ph: 231-935-1514

Fax: 231-935-3829 www.gtbay.org info@gtbay.org

National Agricultural Pest Information System (NAPIS)

CAPS Regional Survey Coordinators for Michigan – see PestTracker printout

CAPS State Survey Coordinator for Michigan Lansing, Ph:(517) 335-0730 Fax: (517) 335-4540

CAPS Pest Survey Specialist for Michigan Detroit, MI, Ph: (734) 942-9005 Fax:(734) 942-7691

CAPS Plant Health Director for Michigan Romulus, Ph: (734) 942-9005 Fax: (734) 942-7691

Eastern Regional CAPS Committee ad hoc member Michigan Dept. of Agriculture PO Box 30017 Lansing, MI 48909 MI: Central Plant Board PH: (517) 373-9747

FAX: (517) 335-4540

Michigan United Conservation Clubs P.O. Box 30235 Lansing, MI 48909-7735

Ph: 517-371-1505 Fax: 517-371-1041

National Oceanic and Atmospheric Administration (NOAA) Great Lakes Environmental Research Laboratory (GLERL) NOAA/GLERL 2205 Commonwealth Blvd. Ann Arbor, MI 48105-2945 Ph: 734-741-2393

Fax: 734-741-2055 www.glerl@noaa.gov

U.S. Environmental Protection Agency Great Lakes National Program Office 77 W. Jackson Blvd. (G-17J) Chicago, IL 60604-3511 Ph: 312-886-4040

Fax: 312-886-2403

www.epa.gov/glnpo/invasive/

ANS (Aquatic Nuisance Species) Task Force Great Lakes Regional Panel website is Great Lakes Commission (GLC) http://www.glc.org/ans/panel.html

Great Lakes Indian Fish and Wildlife Commission http://www.glifwc.org/invasives/

Center For Exotic Species
School of Forest Resources and Environmental Science
Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931
906-487-3470
ces@mtu.edu
http://forest.mtu.edu/research/ces/

Michigan Department of Natural Resources http://www.michigan.gov/dnr/

Great Lakes Natural Resource Center National Wildlife Federation 11100 Wildlife Center Dr. Reston, VA 20190-5362 800-822-9919

The Northeast-Midwest Institute 218 D St., SE Washington, DC 20003-1900 Ph: 202-544-5200

Fax: 202-544-4300

Michigan Department of Agriculture P.O. Box 30017 Lansing, MI 48909 800-292-3939 mda-info@michigan.gov www.michigan.gov/mda

U.S. Department of Agriculture National Agricultural Library National Invasive Species Information Center 10301 Baltimore Ave. Beltsville, MD 20705

USDA Natural Resources Conservation Service 3001 Coolidge Road, Suite 250 East Lansing, MI 48823 Ph: 517-324-5270 Fax: 517-324-5171

Michigan Sea Grant

734-763-1437

http://plants.nrcs.usda.gov/

Invasive Plants Association of Wisconsin P.O. Box 5274 Madison, WI 53705-0274 University of Wisconsin—Milwaukee Field Station 3095 Blue Goose Rd., Saukville, WI 53080

Michigan Aquatic Nuisance Species Council Office of the Great Lakes Michigan Department of Environmental Quality P.O. Box 30473 Lansing, MI 48909 Ph: 517-335-4227

Fax: 517-335-4053

Common Weed Seedlings of Michigan http://web1.msue.msu.edu/msue/iac/e1363/e1363.htm

Invaders Database System University of Montana P.O. Box 30017 Lansing, MI 48909 517-373-1087

http://www.mda.state.mi.us/industry/Nursery/P&Rweeds.html

National Forest System R9 – Eastern Region Regional Invasive Species Program Coordinator U.S. Dept. of Agriculture Forest Service, R-9 626 E. Wisconsin Ave., Suite 800 Milwaukee, WI 53202 414-297-1868 Eastern Nonnatives Regional Coordinator

http://www.fs.fed.us/invasivespecies/contactus.shtml

Huron-Manistee National Forests Supervisor's Office 1755 S. Mitchell St. Cadillac, MI 49601 Ph: 800-821-6263 Fax: 231-775-5551

http://www.fs.fed.us/r9/hmnf/pages/invasive_species.htm

Hiawatha National Forest 2727 N. Lincoln Rd. Escanaba, MI 49829 Ph: 906-786-4062 Fax: 906-789-3311

Ottawa National Forest Non-native Invasive Plant Program Supervisor's Office E6248 U.S. 2 Ironwood, MI 49938 906-932-1330 http://www.fs.fed.us/r9/ottawa/

USDA Forest Service
Forest Health Staff
Newtown Square, PA
http://www.na.fs.fed.us/fhp/invasive_plants
Aquatic Ecosystem Restoration Foundation
P.O. Box 18300
Greensboro, NC 27419-8300
www.aquatics.org

Michigan Department of Natural Resources Mason Building, 6th Floor P.O. Box 30028 Lansing, MI 48909

The Nature Conservancy Invasive Species Initiative Mail Stop 4—Robbins Hall University of California One Shields Ave. Davis, CA 95616-8780 http://tncweeds.ucdavis.edu

Plant Conservation Alliance Bureau of Land Management 1849 C Street NW LSB-204 Washington, DC 20240 202-452-0392 plant@plantconservation.org www.plantconservation.org

Invasive.org
The University of Georgia
P.O. Box 748
4601 Research Way CPES
113 Administration Building
Tifton, GA 31793

Ph: 229-386-3298 Fax: 229-386-3352

U.S. Geological Survey Headquarters John W. Powell Federal Building 12201 Sunrise Valley Dr. Reston, Virginia 20192 703-648-7411

Center for Aquatic and Invasive Plants 7922 N.W. 71st St. Gainesville, FL 32653 Ph: 352-392-1799

Fax: 352-392-3462 CAIP-WEBSITE@ufl.edu Midwest Aquatic Plant Management Society Aquatic Systems, LLC P.O. Box 233 Brownstown, IN 47220 866-442-0420

Environmental Aquatic Management P.O. Box 7239 Algonquin, IL 60102-7239 847-960-7252 www.mapms.org

Midwest Invasive Plant Network The Nature Conservancy of Indiana 1505 N. Delaware St., Suite 200 Indianapolis, IN 46202

Ph: 317-951-8818 Fax: 317-917-2478 <u>Info@mipn.org</u> www.mipn.org

Michigan Lake and Stream Association The Michigan Riparian P.O. Box 249 Three Rivers, MI 49093 www.mlswa.org

Michigan Waterfront Alliance 1603 E. Higgins Lake Dr. Roscommon, MI 48635 Ph: 989-821-6661 www.mwai.org

Michigan Cooperative Monitoring Program mi-water-cmp@mlswa.org

AGENCIES THAT MENTION INVASIVE SPECIES

U.S. Dept. of the Interior

U.S. Geological Survey Great Lakes Science Center 1451 Green Road Ann Arbor, MI 48105 Ph: 734-994-3331

Fax: 734-994-8780 www.glsc.usgs.gov/

North Oakland Headwaters Land Conservancy

P.O. Box 285

Clarkston, MI 48347 Ph: 248-846-6547 Fax: 248-846-6548 Mail@nohlc.org www.nohlc.org/ Berrien County Intermediate School District SouthwestNet Distance Learning Invasive Species Videoconference 711 St. Joseph Ave. Berrien Springs, MI 49103 269-471-7725

American Land Rights Association 30218 N.E. 82nd Ave. P.O. Box 400 Battle Ground, WA 98604

Ph: 360-687-3087 Fax: 360-687-2973

University of Michigan School of Natural Resources and Environment Dana Building, 440 Church Street Ann Arbor, MI 48109-1041 snre-webmaster@umich.edu

Ecosystem Management Initiative Natural Resources and Environment University of Michigan Matthaei Botanical Gardens and Nichols Arboretum 734-998-7061

DeGraaf Nature Center 600 Graafschap Rd. Holland, MI 49423 Ph: 616-355-1057 Fax: 616-355-1069 http://www.degraaf.org citydnc@macatawa.org

National Plant Board
Eastern Plant Board
South Dakota Department of Agriculture
Division of Agricultural Services
Office of Plant Protection
523 E. Capitol Ave., Foss Bldg.
Pierre, SD 57501-3182

Ph: 605-773-3796 Fax: 605-773-3481

Inland Seas Education Association P.O. Box 218, 100 Dame St. Suttons, Bay, MI 49682 231-271-3077 www.greatlakeseducation.org

Table 1.

Scientific Name	Common Name
Abutilon theophrasti	Velvetleaf
Acer gomma;a	Amur maple
Aegopodium podagraria	Goutweed
Agropyron repens	Quackgrass
Ailanthus altissima	Tree-of-heaven
Alliaria petiolata	Garlic mustard
Allium canadense L	Meadow garlic
Allium canadense	Wild onion
Allium vineale L.	Wild garlic
Alnus glutinosa	Black alder
Alopecurus geniculatus	Water foxtail
Ambrosia artemisiifolia elatior (L.) Descourtils	Annual ragweed
Aralia elata	Japanese Angelica Tree
Avena fatua L.	Wild oat
Barbarea vulgaris	Yellow rocket
Berberis thunbergii	Japanese barberry
Berteroa incana (L.) DC	Hoary false madwort
Berteroa incana	Hoary alyssum
Brassica juncea	Indian mustard
Brassica nigra	Black mustard
Bromus tectorum	Cheatgrass
Butomus umbellatus	Flowering rush
Cabomba caroliniana	Fanwort
Cardaria draba (L.) Desv	Whitetop
Cardaria draba	Hoary cress

Cardaria spp. Cardaria Carduus acanthoides L. Spiny plumeless thistle Carduus nutans Musk thistle Plumeless thistle Carduus acanthoides Plumeless thistle Carex acutiformis Swamp sedge Carex flacca Sedge Celastrus orbiculatus Oriental bittersweet Centaurea maculosa Spotted knapweed Centaurea picris Russian knapweed Centaurea solstitialis Yellow Starthistle Centaurea maculosa (= C. biebersteinii) Spotted knapweed Cirsium palustre Marsh thistle Cirsium vulgare Bull thistle Cirsium vulgare Bull thistle Cirsium palustre Cirsium palu		
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Daucus carota Wild carrot	Datura stramonium	Jimsonweed
	Daucus carota L	Queen Anne's lace
Echinochloa crusgalli Barnyard grass	Daucus carota	Wild carrot
	Echinochloa crusgalli	Barnyard grass

Elaeagnus angustifoliae	Russian-olive
Eleagnus umbellatus	Autumn olive
Epilobium parviflorum	Small flowered hairy willow herb
Euonymus fortunei	Winter Creeper
Euphorbia esula	Leafy spurge
Hedera helix	English Ivy
Heracleum mantegazzianum**	Giant hogweed
Hesperis matronalis	Dame's rocket
Hieracium aurantiacum	Orange hawkweed
Hydrocharis morsus-ranae	European frog-bit
Hypericum perforatum	St Johnswort
Impatiens glandulifera	Indian balsam
Ipomoea spp.	Morningglory
Iris pseudacorus	Yellow iris
Ligustrum obtusifolium	Border Privet
Lolium arundinaceum	Tall fescue
Lonicera cultivars and species	Bush honeysuckles exotic
Lonicera morrowii	Morrow honeysuckle
Lonicera imes bella	Bell's honeysuckle
Lonicera japonica	Japanese honeysuckle
Lonicera tartarica	Tartarian honeysuckle
Lycopus asper	Western water horehound
Lysimachia vulgaris	Golden loosestrife
Lythrum salicaria L.	Purple loosestrife
Lythrum spp.	Loosestrife
Mahonia bealei (Fortune) Carr.	Leatherleaf mahonia
Marsilea quadrifolia	European water-clover
Melilotus officinalis	Yellow sweet-clover

Meliotus alba	White sweet-clover
Mentha piperita	Peppermint
Mentha spicata	Spearmint
Miscanthus sinensis	Chinese Silvergrass
Myriophyllum spicatum	Eurasian watermilfoil
Najas minor	Minor naiad
Najas minor	Brittle naiad
Nassella trichotoma	Serrated tussock
Nassella trichotoma Hackel ex Arech.	Serrated tussock grass
Nasturtium officinale	Water-cress
Nymphoides peltata	Yellow floating heart
Onopordum acanthium	Scotch Thistle
Phalaris arundinacea	Reed canary grass
Phragmites australis	Common reed
Plantago lanceolata L.	Narrowleaf plantain
Plantago lanceolata	Buckhorn plantain
Pluchea odorata var. succulenta	Salt-marsh fleabane
Polygonum caespitosum var. longisetum	Bristly lady's thumb
Polygonum cuspidatum	Japanese knotweed
Polygonum sachalinense	Giant knotweed
Populus alba	White poplar
Potamogeton crispus	Curly pondweed
Raphanus raphanistrum L.	Wild radish
Rhamnus cathartica	Common buckthorn
Rhamnus frangula	Glossy buckthorn
Ribes rubrum L.	Cultivated currant
Ribes spp. L.	Currant
Robinia pseudoacacia	Black locust

Rorippa sylvestris	Creeping yellow cress
Rorippa nasturtium aquaticum	Water cress
Rosa multiflora	Multiflora rose
Rumex obtusifolius	Bitter dock
Rumex crispus	Curly dock
Rumex longifolium	Yard dock
Sagittaria montevidensis	Long-lobed arrow-head
Salix alba	White willow
Salix fragilis	Crack willow
Salix purpurea	Purple willow
Senecio jacobea	Stinking willie
Senecio jacobaca	Tansy Ragwort
Setaria faberi Herrm.	Japanese bristlegrass
Setaria faberi	Giant foxtail
Sinapis arvensis L.	Charlock mustard
Solanum sarrachoides	Hairy nightshade
Solanum dulcamara L.	Climbing nightshade
Solanum carolinense L.	Carolina horsenettle
Solanum carolinense	Horsenettle
Solanum dulcamara	Bittersweet nightshade
Solanum elaeagnifolium Cavanaugh	Silverleaf nightshade
Solanum nigrum L.	Black nightshade
Solanum ptycanthum	Eastern black nightshade
Solanum ptychanthum Dunal	West Indian nightshade
Solidago sempervirens	Seaside goldenrod
Sonchus arvensis L.	Field sowthistle
Sonchus arvensis var. glabrescens	Smooth field sow thistle
Sonchus arvensis	Perennial sowthistle

Sorghum almum	Columbus grass Note: including sorghum almum and seed which cannot be distinguised from Johnsongrass
Sorghum halepense (L.) Pers.	Johnsongrass
Sorghum almum Parodi	Columbus grass
Sparganium glomeratum	Bur reed
Spiraea japonica	Japanese Spiraea
Stellaria aquatica	Giant chickweed
Thlaspi arvense	Fanweed
Thlaspi arvense L.	Field pennycress
Tribulus terrestris	Puncturevine
Ulmus pumila	Siberian elm
Valeriana officinalis	Common valerian
Veronica beccabunga	European brooklime
Vicia villos	Hairy Vetch
Vincetoxicum nigrum	Black Swallow-wort
Wisteria	Exotic Wisterias
Xanthium strumarium	Cocklebur
Xanthium strumarium L.	Rough cockleburr